US Army Corps
of Engineers
North Central Division

GREAT LAKES LEVELS
UPDATE NO. 20
4 MARCH 1987

Good news! The second dry month in a row. Early preliminary reports indicate that all the Great Lakes basins received below average precipitation during February, some of them near the record minimum amounts.

Some more good news! For the first time since August, 1985, no new record high levels were set on any of the Great Lakes. A word of caution, however. While the last couple of months of below normal precipitation have provided some relief from the high lake levels conditions, it would not be advisable to lower our vigilance yet. A review of historical data shows that, for example, dry Februarys in 1952 and 1969 in the Lakes Michigan-Huron basin were followed by high water levels later in those same years, as the result of heavy rainfall amounts in subsequent months. The point to remember is that, until a lot more water can leave the basin as outflow and evaporation, significant additional rainfall can reverse the situation and easily extend our troubles. The attached bulletin shows that all the Great Lakes are expected to remain high through August 1987.

And now some good news and bad news concerning the unusually mild winter of 1986-87 which has led to certain occurrences out of the ordinary. The good news concerns the St. Lawrence River. Freeze-up began very late and record high outflows were possible, as noted in my last update. We were able to discharge an average of 299,000 cfs in January, an all-time record. However, the duration of the intensely cold temperatures was not as long as needed to form a stable ice cover. Rather, the ice began to melt and erode back so that, in late January and early February, the International St. Lawrence River Board of Control was able to repeatedly increase the outflow. In mid-February, a return of very cold temperatures required a flow reduction to reestablish an ice cover on open areas of the river. Despite the additional flow reductions, the February outflow of about 286,000 cfs was a near record amount. Outflows are presently being increased as ice conditions permit.

However, on the St. Clair River, the result of a weakened ice cover was not as fortunate. Strong north winds on February 14th and 15th forced broken ice from Lake Huron to enter the St. Clair River and jam in the lower river. U.S. Coast Guard ice breakers were called on to remove or reduce the partial blockage and lower the water levels. The ice jam flooding caused the evacuation of some homes in the vicinity of Algonac, Michigan.

Also, not as fortunate were some of the lakeshore residents. Normally, there is some ice cover on the lakes in February so that storms at that time do little damage. However, that was not the case for the February 8th storm over Lake Michigan, when storm waves combined with the already high water level caused extensive damage along the southern Michigan, Indiana, Illinois and Wisconsin shores, especially on the Milwaukee and Chicago lakefronts. Damages were also reported in Milwaukee and Kenosha Counties, Wisconsin, and Leelanau and Manistee Counties, Michigan.

The International Joint Commission (IJC) is continuing to direct the outflows for the two Great Lakes that are regulated. The Lake Superior outflow is at its specified

Plan 1977 outflow setting. The Lake Ontario outflow is being regulated under an emergency action, known as Criterion (k) and provided for in the IJC's Orders of Approval. The emergency action through February has reduced the Lake Ontario level by about 2-1/2 feet below the level that would have occurred without regulation.

Under the authority of Public Law 84-99, the Corps of Engineers has continued with the Advance Measures program, which consists of constructing preventive works prior to a flood threat to life and property. There has been little change in the status of the program since my February 4th summary with eight projects completed in Michigan and Ohio. There are four approved projects pending construction.

The Corps is also authorized to assist local communities in responding to actual flooding situations, to supplement maximum state and local efforts. Requests for assistance should be directed through local and state disaster assistance agencies. For Great Lakes basin technical assistance or information, please contact one of the following Corps of Engineers District Offices:

For New York, Penn. & Ohio
Colonel Daniel R. Clark
Cdr, Buffalo District
1776 Niagara Street
Buffalo, NY 14207-3199
(716) 876-5454-Ext. 2201

For Mich., Minn. & Wisc.
Colonel Robert F. Harris
Cdr, Detroit District
P.O. Box 1027
Detroit, MI 48231-1027
(313) 226-6440 or
226-6441

For Ill. & Indiana
LTC Frank R. Finch
Cdr, Chicago District
219 S. Dearborn St.
6th Floor
Chicago, IL 60604-1797
(312) 353-6400

You can still get the "Help Yourself" brochure from the District Offices listed above or from this office: North Central Division, 536 South Clark Street, Chicago, Illinois 60605-1592, telephone: (312) 353-6364.

Near-shore wave warnings are provided by various National Weather Service Offices for certain portions of the Great Lakes. Information can normally be heard on the National Weather Service's local weather radio broadcasts.

The Corps of Engineers' "Self-Help" program of distributing sandbags, sand and plastic sheeting to threatened communities is continuing. A summary of distributions through February 27, 1987, follows:

	Sandbags	Sand (tons)	Plastic Sheeting (rolls)
Buffalo District	3,803,000	58,206	1,160
Chicago District	240,400	1,423	41
Detroit District	2,696,300	18,270	1,292
Total	6,739,700	77,899	2,493

You have my assurance that these updates will continue to accompany the monthly bulletin until the lakes return to safe levels.

Joseph Pratt

JOSEPH PRATT
Brigadier General, USA
Commanding